Covering the Uninsured Through Medicaid: Lessons From the Oregon Health Plan

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Abstract

The Oregon Health Plan (OHP), Oregon's Section 1115 Medicaid waiver program, expanded eligibility to all residents living below poverty. We use survey data, as well as OHP administrative data, to profile the expansion population and to provide lessons for other states considering such programs. OHP's eligibility expansion has proved a successful vehicle for covering large numbers of uninsured adults, although most beneficiaries enroll for only a brief period of time. The expansion population, particularly childless adults, is relatively sick and has high service use rates. Beneficiaries are also likely to enroll when they are in need of care.

Introduction

The size of the uninsured population in the United States has been a persistent concern even during recent years of strong economic growth and low unemployment. Expanding Medicaid eligibility has been adopted as one approach to reducing the ranks of the uninsured, particularly among children and pregnant women. A few states have adopted a broader Medicaid strategy, using it to cover low-income populations generally. Among these is Oregon's Section 1115 Medicaid waiver program, the Oregon Health Plan (OHP), which expands Medicaid eligibility to include all residents with incomes below 100 percent of the Federal Poverty Level (FPL).[1] Other important innovations adopted as part of OHP include the use of a prioritized list of medical conditions and treatments to define the benefit package and mandatory enrollment in managed care for nearly all eligibles.

The OHP expansion population is divided into two groups: New Families and New Adults/Couples. New Families includes adults over the age of 18 with children, while New Adults/Couples includes single adults and childless couples. Prior to Oregon's implementation in July 1998 of the State Children's Health Insurance Program (SCHIP), which covers all children under age 19 up to 170 percent of the FPL, New Families also included children born before October 1, 1983.[2] Although the two categories of expansion beneficiaries are subject to the same eligibility standards and receive the same benefits, OHP distinguished the two groups because it was assumed that their utilization would differ substantially. New Families were

[1] Initially, there was no asset test for expansion eligibility. Since October 1995, beneficiaries are allowed a maximum of $5,000 in assets. Beginning in December 1995, expansion beneficiaries have been charged a premium for their coverage. See Haber, Mitchell, and McNeill (2000) for a description of the premium requirement.

[2] Poverty-level children born after this date already received Medicaid coverage under OBRA expansions that required all states to cover pregnant women and children less than age six in families below 133 percent of the FPL, and children born after October 1, 1983 in families below 100 percent FPL.

thought to closely resemble traditional AFDC (now TANF) eligibles,[3] whereas New Adults/Couples initially were expected to resemble a commercially insured population. However, after the program was implemented, it became evident that New Adults/Couples were far sicker and more costly than anticipated.

The expansion program has been extremely successful at enrolling uninsured Oregonians in Medicaid. It is estimated that the program enrolled 64 percent of the potentially eligible population in 1996 (Lipson and Schrodel, 1996). Over the first five years of OHP operation, the eligibility expansion extended Medicaid coverage to nearly 428,000 unique individuals. The vast majority (over 80 percent) were adults. The expansion population grew far more rapidly than anticipated, peaking during the program's second year at more than 134,000 eligibles. However, it subsequently declined to just over 81,000 by January 1999, the end of the fifth year (Figure 1).[4] The decrease in the number of eligibles occurred among both New Families and New Adults/Couples. However, as shown in Figure 1, the decline between July 1997 and July 1998 was far more precipitous for New Families. This is partly explained by the movement of children out of the New Families category following the implementation of Oregon's SCHIP program. A variety of other explanations have been advanced to explain the declining size of the expansion population including the imposition of a premium requirement,[5] a robust economy, and several changes in eligibility requirements.[6]

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[3] In fact, Oregon's waiver application referred to New Families as New Categorical Eligibles.

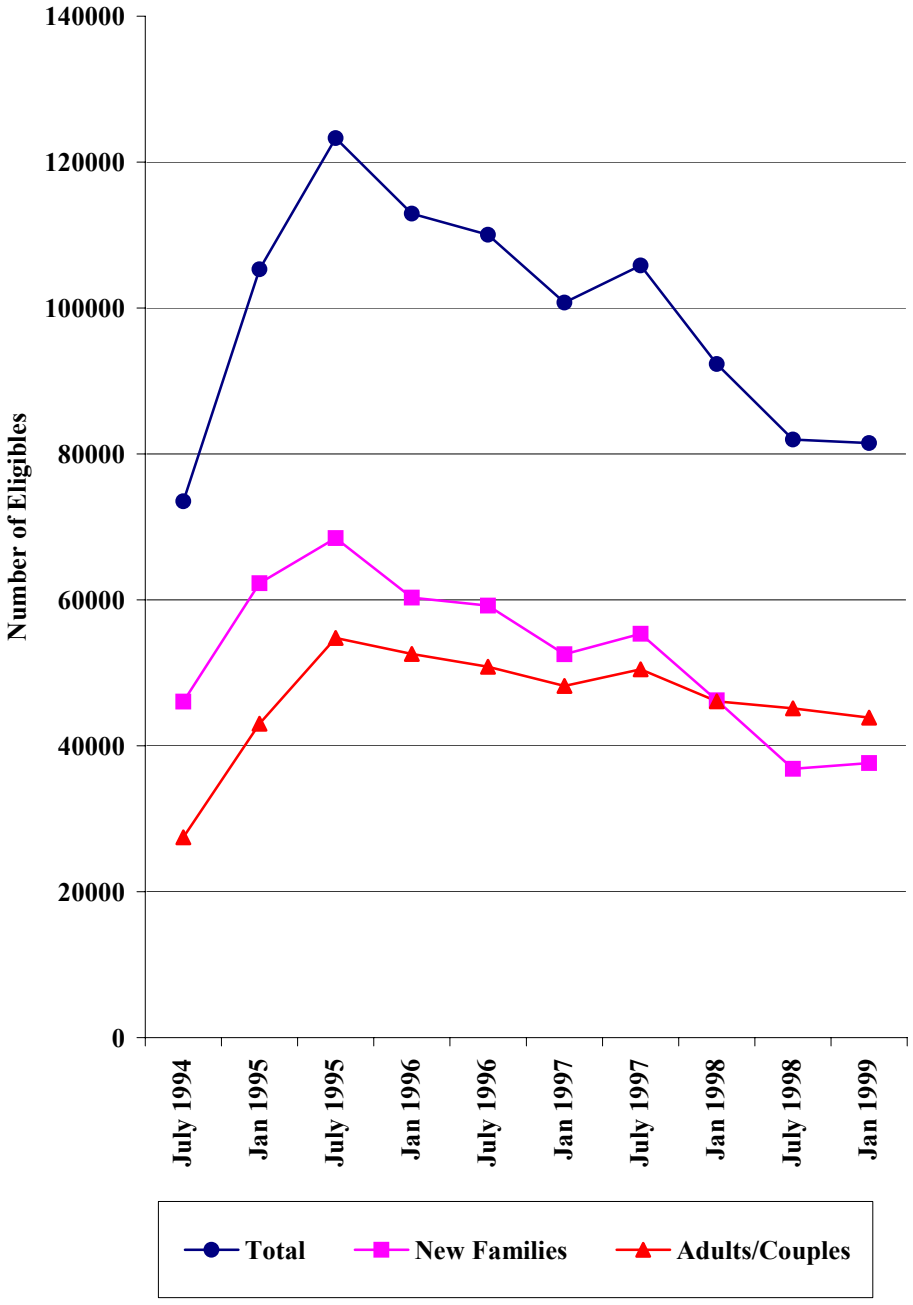
[4] Oregon's Section 1115 waiver cost estimate assumed that the expansion would cover an average of 78,300 beneficiaries per month in the second year, increasing to 117,600 in the fifth year.

[5] See Haber, Mitchell, and McNeill (2000) for a discussion of the impact of premiums on eligibility.

[6] Beginning October 1, 1995, the basis for calculating financial eligibility was changed from the previous month's income only to the average of the most recent three months and an asset limit of $5,000 was imposed. Full-time college students were also excluded from expansion eligibility, although they were later reinstated on January 1, 1999.

Figure 1

Trends in Number of Expansion Eligibles



SOURCE: Office of Medical Assistance Programs.

The expansion population quickly became a very significant portion of Oregon's Medicaid program. In mid-1995, expansion eligibles comprised 40 percent of the Phase 1 population[7] and 33 percent of the total Medicaid population. Despite the reduction in the number of expansion eligibles, they still accounted for 32 percent of Phase 1 eligibles and 24 percent of all Medicaid eligibles in January 1999.

This paper profiles the OHP expansion population, including its sociodemographic and other characteristics, service use, and continuity of coverage. Oregon's experience can help answer important questions for other states looking to Medicaid eligibility expansions as a way of covering adult populations that fall outside of traditional eligibility categories. How effective are Medicaid expansions for increasing insurance coverage? Do they crowd-out private insurance? Do they provide continuous insurance coverage or do beneficiaries enroll episodically when they become ill? Do these programs enroll sick populations with high service use? Are there systematic differences between adults with and without children?

Experience with Medicaid Eligibility Expansions in Other States

Many states have expanded Medicaid eligibility for pregnant women and children by raising allowable income and asset levels or otherwise relaxing eligibility criteria. Far fewer have targeted the populations that fall outside of traditional Medicaid eligibility categories—adults under age 65 in two-parent families[8] and childless adults under age 65. To date, eleven

[7] Phase 1 of OHP, which began in February 1994, included TANF, OBRA, general assistance, and expansion eligibles. In January 1995, the aged, blind, disabled, and children in foster care were brought into OHP.

[8] States may elect to cover adults in two-parent households where one of the parents is incapacitated or where the principal wage-earner works less than 100 hours per month. Prior to welfare reform, the principal wage earner also had to meet certain work history requirements (Guyer and Mann, 1998).

states (including Oregon) and the District of Columbia have enacted such expansions.[9] Nine of these programs (Delaware, the District of Columbia, Hawaii, Massachusetts, Minnesota, Oregon, Tennessee, Vermont, and Wisconsin) were implemented using Section 1115 waivers. Three states (New Jersey, Washington, and New York) adopted expansions without federal matching funds. Since welfare reform, Section 1931 gives states the option of covering two-parent families without a waiver. States may also use SCHIP funds to purchase family coverage if they can demonstrate that it is more cost effective than covering only the children and if the coverage meets Title XXI standards, including minimum benefit and maximum cost-sharing requirements. However, states have found it difficult to meet these SCHIP requirements and, to date, only Massachusetts, Wisconsin, and Mississippi have approved programs that cover parents.

There are several key program design features that need to be taken into account when comparing experience across state expansion programs. Among these are: 1) the income levels included in the expansion; 2) whether adults without children are covered or only parents; and 3) whether pre-existing conditions are excluded.

The maximum allowable income under these state eligibility expansions varied considerably and several of the more generous programs subsequently limited eligibility. Tennessee initially had the most generous program, allowing anyone to buy into Medicaid and providing subsidies up to 400 percent of FPL. Washington similarly did not set an income limit, but subsidies were not available to people with incomes above 200 percent of FPL. Hawaii, New Jersey, and New York also had extremely comprehensive programs, covering up to 300,

[9] Information on state eligibility expansions is drawn from Lipson and Schrodel (1996). Information on Section 1115 waiver programs implemented after this report was issued and updated information on these programs is taken from fact sheets on individual state demonstrations available from http://www.hcfa.gov/medicaid; Internet; accessed 01 Feb 2000.

250, and 200 percent of FPL, respectively.[10] However, each of these programs has now limited enrollment. Programs in New Jersey, New York, and Tennessee are closed to new enrollees, with the exception of the medically uninsurable in Tennessee. Washington caps enrollment in the Basic Health Plan and Hawaii now only covers up to 100 percent of FPL.

Unlike Oregon, which covers all adults, the eligibility expansions in several states have a particular emphasis on covering parents, based on the assumption that covering the entire family increases the likelihood that eligible children will be enrolled in Medicaid. Minnesota covers families up to 275 percent of FPL, while adults without children are only eligible up to 135 percent. Massachusetts covers families up to 150 percent of FPL; however, any resident with an income below 200 percent of FPL is eligible for a premium subsidy program provided they have access to employer-sponsored health insurance that meets certain requirements. Wisconsin only extends eligibility to parents (up to 185 percent of FPL). On the other hand, the District of Columbia's eligibility expansion is targeted at adults age 50 to 64 whose income is below 50 percent of FPL. Of the remaining programs, Vermont covers all residents up to 150 percent of FPL, while Delaware, like Oregon, covers up to the poverty line.

There has been relatively little research on characteristics of the expansion populations covered under these programs, in part because a number are relatively new or have only been implemented recently. Several studies have examined one of the older programs, Washington's Basic Health Plan (BHP), which was first implemented in 1988. BHP enrolled both adults and children and findings reported here include both groups.

[10] Hawaii's program only covered people who were not insured under their employer mandate.

One BHP study found substantial differences between enrollees and those who were eligible, but not enrolled, in terms of education, age, income, employment status, race, and insurance status (Diehr, Madden, Martin, *et al.* 1993). However, they did not differ on most measures of health status and the few significant differences tended to show that enrollees were in better health. Enrollees also had similar or lower utilization at baseline compared to eligible nonenrollees and after one year of enrollment compared to insured nonenrollees. A later study found no evidence of pent-up demand (Martin, Diehr, Cheadle, *et al.*, 1997). Although 85 percent of BHP members had some service use during their first year of enrollment, use was fairly stable when measured in six months blocks over the course of the first two years of enrollment. A third study found that BHP enrollees had similar utilization patterns compared to employer-sponsored groups enrolled in the same HMOs, although their health status was somewhat poorer (Kilbreth, Coburn, McGuire, *et al.*, 1998). However, the absence of adverse selection and pent-up demand in the BHP may be explained by the program's exclusion of coverage for pre-existing conditions during the first year of enrollment. In contrast, OHP provides immediate coverage once eligibility is approved.

A study of a non-Medicaid program compared members that enrolled in Kaiser Permanente of Colorado through a premium subsidy program for the uninsured (sponsored by Kaiser) with a random sample of new commercial enrollees (Bograd, Ritzwoller, Calonge, *et al*., 1997). The groups did not differ in their use of hospital services or outpatient laboratory, pharmacy, and radiology services. After controlling for age and sex differences, enrollees in the premium subsidy program were 30 percent more likely to have an outpatient visit. This difference was mostly attributable to specialty care. Half of the difference in outpatient use was

explained by the poorer health status of the premium subsidy population, although the explanatory power of health status was largely confined to children and only had a small effect for adults. Both the premium subsidy and commercial populations had higher rates of service use early in their enrollment; however, this start-up effect was similar for the two groups.

Data Sources

The analyses in this paper rely on two complementary data sources. Some of the analyses draw on a 1998 telephone survey of a statewide, random sample of OHP beneficiaries and a comparison sample of Food Stamp recipients who were not enrolled in Medicaid. In addition, we analyze Medicaid eligibility, claims, and encounter data maintained by the Office of Medical Assistance Programs (OMAP), the state agency that administers OHP. To the extent that these data sources provide overlapping information, we draw on both to enrich our profile of the expansion population.

The survey provides richer data on many issues, such as sociodemographic characteristics and health status, than are available in the administrative data. In addition, it includes a non-OHP, low-income comparison sample. However, the survey only reflects experience at a point in time and, as described later, it is restricted to OHP recipients with essentially a full year of continuous eligibility. Many Medicaid beneficiaries receive episodic coverage and the majority of the expansion population is eligible for less than a year. It is likely that there are systematic differences within the expansion population based on length of eligibility. As a result, the survey sample may not be representative of the full OHP population. Administrative data, in contrast, are available for multiple years, which allows us to look at

trends over the life of the program. Furthermore, these data include the universe of OHP recipients, regardless of their length of eligibility.

The survey includes data on self-reported utilization and includes information on service use (for example, prescription drugs) that is not available in claims and encounter data. On the other hand, we have greater flexibility in analyzing administrative data. For example, maternity services can be differentiated from non-maternity services, which is particularly important in our comparisons of the TANF and expansion populations. However, encounter data may substantially under-represent the volume of services actually provided. Under-reporting of encounter data by managed care plans has been a persistent problem in OHP, as it is in most managed care programs. We only use claims and encounter data to compare expansion beneficiaries' utilization with that of non-expansion beneficiaries. Since we are interested in relative utilization, rather than absolute levels of service use, and we do not have any reason to suspect that under-reporting varies by eligibility category, this mitigates concerns about the completeness of encounter data reporting.

All analyses are restricted to adults aged 19 or older because the expansion population has been primarily adult since its inception. With the implementation of Oregon's SCHIP program, the expansion population is now exclusively adult.

Survey Design and Analytic Method

Survey data are drawn from a 1998 telephone survey of a statewide, random sample of OHP adults aged 19-64 and a comparison sample of Food Stamp recipients who were not

enrolled in OHP.[11] Oregon's Food Stamp program covers people up to 130 percent of poverty. While some Food Stamp recipients are eligible for OHP, others have an income that places them somewhat above the expansion eligibility ceiling of 100 percent of FPL. Thus, the Food Stamp program provides a control group of low-income individuals who are ineligible for OHP. Some Food Stamp recipients have private insurance coverage (54 percent of survey respondents), while others are uninsured.

State eligibility files for both programs were used to construct the sampling frames. Adults covered under TANF and the expansion program were eligible for the OHP sample. The OHP sampling frame was defined as people eligible in one of these categories in January 1998 and who had been enrolled in OHP in one of these categories for at least ten of the previous twelve months. The Food Stamp sampling frame was defined as people participating in the program as of March 1998 and who had not been enrolled in OHP during the previous twelve months.

A total of 1,205 OHP beneficiaries and 316 Food Stamp recipients responded to the survey, representing response rates of 70 and 33 percent respectively. Expansion beneficiaries account for three-quarters of the respondents in the OHP population (903) and they had a higher than average response rate (76 percent). The response rate for the OHP sample meets or exceeds those achieved in other published surveys of Medicaid populations (Coughlin and Long, 1999; Sisk, Gorman, Reisinger, *et al*., 1996). Despite extensive efforts to trace cases that could not be contacted given the information on the eligibility files, many Food Stamp sample members could

[11] A survey was also administered to children enrolled in OHP and Food Stamps; however, they are not included in these analyses.

not be located. These problems may be due to Oregon's adoption of an automated debit card system to maintain Food Stamp recipients' accounts. Unlike the traditional method of mailing Food Stamps to recipients each month, a recipient no longer needed to maintain current address information with the State in order to receive benefits.

Among other issues, the survey included questions on respondent sociodemographic characteristics, health status, and service use. Within the expansion population, we compare New Families and New Adults/Couples. Our analyses also compare the expansion population to Food Stamp recipients and to a traditional Medicaid population of TANF beneficiaries. The TANF population is predominantly female (91 percent), whereas only 60 percent of the expansion population in our survey was female. This makes it difficult to compare service use between these groups because we expect substantial variation by gender. In order to eliminate the effect of the difference in gender distribution, our comparisons of the TANF and expansion populations are limited to females only.

Chi-square tests were used to determine the statistical significance of all categorical variables and t-tests were used for continuous variables. We also used logistic regression to analyze the probability of using a variety of services, holding constant sociodemographic and health status characteristics that could explain utilization differences. Covariates included age, race, gender, marital status, education, employment status, geographic location, and health status. Due to the complex sample design, descriptive and multivariate analyses used SUDAAN to make weighting and standard error adjustments.

OHP Administrative Data

Monthly Medicaid eligibility files, which identify eligible beneficiaries as of the first of the month, were used to identify characteristics of the expansion population and to construct eligibility spells. A spell is defined as a period of uninterrupted eligibility. Because Medicaid beneficiaries may lose eligibility briefly, for example if they do not reapply on time, we consider people with a one-month break in coverage to be continuously eligible. In addition, we linked claims and encounter data to eligibility data to examine service use.

Eligibility data were available from the initiation of OHP in 1994 through the end of 1998. Claims and encounter data were available for services provided in 1996 and 1997. As noted previously, encounter data may substantially under-report the quantity of services actually provided. The quality of encounter data reporting improved considerably after OMAP announced that they would use encounter data from 1996 onward to set capitation rates and risk adjust payments to plans. As a result, the completeness of encounter data for the early years of OHP (1994 and 1995) is considerably poorer than for subsequent years and, therefore, they were not used in our study. However, previous analyses indicated that the quality of encounter data reported for 1996 and 1997 was adequate for use in this study. Because of the lag in reporting encounters, complete data for 1998 were not available in time for inclusion in this study.

Administrative data are used to profile the expansion population generally, as well as subgroups of expansion beneficiaries, and to compare them with a traditional Medicaid population of TANF recipients. As described later in this paper, nearly one-third of expansion beneficiaries has some period of OHP eligibility in a non-expansion category, most often TANF. To eliminate the complications introduced by these eligibility transitions, most of our

comparisons are confined to beneficiaries that are exclusively eligible in a single category (i.e., expansion or TANF). In some cases, however, we report data on expansion beneficiaries with mixed eligibility.

Chi-square tests were used to determine the statistical significance of all categorical variables and t-tests for continuous variables. In addition, we estimated a proportional hazard model for length of eligibility. Because Medicaid beneficiaries are eligible for differing lengths of time and service use is observed over varying periods, utilization was transformed to annual use rates.[12] Observations are then weighted by the fraction of the year a person was eligible to accurately estimate average annual costs.

Characteristics of the Expansion Population

Table 1 displays survey findings on characteristics of the expansion population, overall and by eligibility category. On average, expansion population survey respondents were 42 years old. Sixty percent are female and over one-third are married. Reflecting the Oregon population as a whole, the vast majority of expansion beneficiaries in both categories are white and non-Hispanic. Almost eighty percent of expansion beneficiaries have a high school education or higher and, of these, nearly half have some college education. A surprisingly high percentage of expansion beneficiaries reported that they were employed (45 percent) and in more than half of the expansion households either the respondent or spouse was working. Despite the reasonably

[12] The exception is utilization analyzes that are restricted to the first month of an eligibility spell since utilization was measured for a uniform time period for all beneficiaries. In addition, it is not possible to annualize the probability of using a service. The logistic regressions include a variable for length of eligibility to control for the greater likelihood of using services as the observation period increases.

Table 1

Characteristics of Expansion Population Survey Respondents

	All Expansion (n=903)	New Families (n=349)	New Adults/Couples (n=554)
Mean Age	42.3	36.9	45.8**
Female (%)	60.4	68.6	55.0**
Married (%)	35.8	58.5	21.1**
Race/Ethnicity (%)[a]			
White, non-Hispanic	86.5	85.2	87.4
Black, non-Hispanic	1.8	1.5	2.0
Hispanic	3.6	5.5	2.4
Asian	2.3	3.0	1.8
Native American	5.5	4.5	6.2
Other	0.2	0.3	0.2
Education (%)[a]			
Less than high school	22.6	18.1	25.4
High school graduate	39.8	43.7	37.2
Attended college/college graduate	37.7	38.2	37.3
Respondent Employed (%)	44.9	56.2	37.5**
Respondent and/or Spouse Employed (%)	53.9	74.5	40.5**
Family Income[a]			**
$6,000 or less	63.7	46.2	75.1
$6,001-$10,000	14.8	13.7	15.5
$10,001-$18,000	15.4	28.1	7.2
Over $18,000	6.0	12.0	2.2
SF-12 Score[b]			
Physical Health	44.4	47.9	42.2**
Mental Health	48.4	49.6	47.6*
Disability Prevents Respondent from Working (% yes)	26.5	11.1	36.5**

[a]Percentages sum to 100 percent within category by column.
[b]A higher score indicates better health status.
**Significantly different from New Families at p<.01.
*Significantly different from New Families at p<.05.

SOURCE: HER/RTI Survey 1998.

high employment rate, income levels are low, with nearly two-thirds earning $6,000 or less annually.

The expansion population is in fairly poor health. Table 1 reports three measures of health status: (1) the SF-12 physical health score; (2) the SF-12 mental health score; and (3)

whether a disability prevents the respondent from working. The last variable may capture chronic conditions or impairments not captured by either of the SF-12 scales. SF-12 scores are scaled to an average of 50 for the population of the United States as a whole, with a higher score indicating better health. The expansion population reports somewhat poorer physical and mental health status than the general population. In addition, just over one-quarter of expansion population respondents indicated that they could not work because of a disability.[13]

New Adults/Couples differed significantly from New Families on nearly every dimension examined, supporting Oregon's assumption that these are distinct populations. Beneficiaries in the New Adults/Couples category are, on average, nearly ten years older than New Families and they are significantly less likely to be female. New Adults/Couples are about one-third as likely to be married (21 percent compared to 59 percent for New Families). New Adult/Couple eligibles were significantly less likely to be employed; 41 percent reported that either they or their spouse was employed compared to three-quarters of New Families. In addition, New Adults/Couples have a significantly lower income distribution, with three-quarters earning $6,000 or less as compared to 46 percent of New Families. New Adults/Couples report significantly poorer health status than New Families along all three dimensions. Most strikingly, more than one-third (and nearly 60 percent of those who are unemployed) report that a disability prevents them from working. By comparison, just over 10 percent of New Families (one-quarter of those who are unemployed) had such a disability.

[13] This is self-reported disability; presumably these individuals do not satisfy the requirements for Medicare or Medicaid eligibility due to disability.

One concern about using Medicaid eligibility expansions to cover the uninsured is the potential for publicly provided insurance to crowd-out private insurance. Based on survey responses, this does not appear to be a major problem in OHP. Overall, less than 9 percent of expansion beneficiaries reported having access to employer-based insurance and 74 percent were uninsured prior to joining OHP. Only 15 percent were insured through an employer before they joined OHP and, of these, only 27 percent (approximately 4 percent of all expansion respondents) enrolled because their employer dropped their insurance coverage. New Adults/Couples were only one-third as likely as New Families to have access to employer-based insurance (5 percent versus 15 percent) and were more likely to have been uninsured prior to enrolling in OHP (78 percent versus 68 percent).

Table 2 compares overall expansion population characteristics to those of Food Stamp respondents, as well as female expansion to female TANF beneficiaries. Food Stamp recipients are significantly younger than expansion beneficiaries. Food Stamp recipients are also substantially more likely to be employed. As expected, the income level of Food Stamp recipients is significantly higher than that of expansion beneficiaries. Expansion beneficiaries are in poorer physical health than Food Stamp recipients and are nearly three times more likely to be unable to work due to disability, although their mental health status does not differ.

Even after restricting comparisons between the expansion and TANF populations to females only, there remain substantial differences between these groups (Table 2). As expected given that most adult TANF recipients are single mothers, female TANF beneficiaries are significantly younger and less likely to be married than female expansion beneficiaries. Because of these differences, we expect TANF beneficiaries to have greater use of maternity-related

Table 2

Characteristics of Expansion, Food Stamp, and TANF Population Survey Respondents

	All Expansion (n=903)	All Food Stamp (n=316)	Female Expansion (n=560)	Female TANF (n=275)
Mean Age	42.3	34.5**	41.9	32.1##
Female (%)	60.4	51.2	N/A	N/A
Married (%)	35.8	43.9	33.4	13.3##
Race/Ethnicity (%)[a]				##
White, non-Hispanic	86.5	80.7	87.4	71.6
Black, non-Hispanic	1.8	3.1	1.6	9.0
Hispanic	3.6	9.5	3.8	10.9
Asian	2.3	3.0	2.8	2.2
Native American	5.5	3.5	4.2	5.8
Other	0.2	0.3	0.2	0.4
Education (%)[a]				
Less than high school	22.6	21.9	21.4	27.5
High school graduate	39.8	33.5	40.0	42.7
Attended college/college graduate	37.7	44.6	38.6	29.9
Respondent Employed (%)	44.9	66.5**	47.2	45.8
Respondent and/or Spouse Employed (%)	53.9	79.4**	58.2	49.2#
Family Income[a]		**		
$6,000 or less	63.7	45.0	64.3	64.9
$6,001-$10,000	14.8	8.9	14.1	17.5
$10,001-$18,000	15.4	20.1	15.9	13.7
Over $18,000	6.0	26.0	5.7	3.8
SF-12 Score[b]				
Physical Health	44.4	49.6**	44.8	44.0
Mental Health	48.4	49.7	48.1	45.0##
Disability Prevents Respondent from Working (% yes)	26.5	9.2**	22.7	28.3

[a]Percentages sum to 100 percent within category by column.
[b]A higher score indicates better health status.
**Significantly different from Expansion at p<.01.
*Significantly different from Expansion at p<.05.
Significantly different from Female Expansion at p<.01
Significantly different from Female Expansion at p<.05

SOURCE: HER/RTI Survey 1998.

services than expansion beneficiaries and it will be important to isolate the impact of maternity services in comparisons between these groups.

Female TANF respondents are less likely to be white than female expansion beneficiaries. While expansion beneficiaries are more likely to report that they or their spouse is employed, there are no differences in family income. The only health status measure that differs significantly between female expansion and female TANF beneficiaries is mental health, which is significantly poorer for TANF recipients.

Analyses of OHP eligibility files revealed some important differences in the demographic characteristics of the expansion population compared to survey findings. Eligibility data show that the expansion population has a mean age of 35, considerably younger than 42 as reported in the survey. Eligibility data also indicate a more equal gender mix in the expansion population, with only 53 percent female, as compared to 60 percent in the survey data. Indeed, based on eligibility files, the majority of New Adults/Couples are male. In addition, the eligibility files show that Hispanics comprise twice as large a share of the expansion population than is indicated by the survey data (7.2 percent versus 3.6 percent).

Inconsistencies between survey data and the eligibility files are explained by a variety of factors, including different reference periods and possible biases in the population of survey respondents. First, the survey includes only beneficiaries with essentially a full year of eligibility and these beneficiaries are not representative of the overall expansion population. As reported later, eligibility spell length increases with age and female gender so that expansion beneficiaries with a full year of eligibility are older and more likely to be female than the overall population. In addition, eligibility files show that females constitute an increasing share of the

expansion population over time, while Hispanics constitute a declining share of the expansion population (falling from 8.0 percent in 1994 to 6.5 percent in 1998). Therefore, one would expect a greater representation of females and a lesser representation of Hispanics in the survey, which reflects eligibles as of January 1998, compared to eligibility data covering 1994 through 1998. In addition, Hispanics may have lower response rates because the survey did not use Spanish-speaking interviewers.

Service Use

As discussed previously, expansion beneficiaries are in relatively poor health compared to both the U.S. population generally and a low-income population of Food Stamp recipients. Indeed, service use by expansion beneficiaries, particularly New Adults/Couples, has been higher than initially projected. In addition, plans contend that expansion beneficiaries tend to become eligible during an episode of illness and, in many cases, do not re-enroll at the end of their guaranteed six-month period of eligibility unless they have ongoing service needs.[14] The implications of this are two-fold: first, the expansion program will be subject to adverse selection if beneficiaries are only enrolled during periods of illness; second, if expansion beneficiaries become eligible during a hospital stay, much of their service use will be covered by OMAP on a fee-for-service basis and not under capitated payments to managed care plans. Indeed, capitation rates for New Adults/Couples have been adjusted downward to reflect this

[14] Plans assert that this pattern has been exacerbated by the imposition of premiums for the expansion population. See Haber, Mitchell, and McNeill (2000) for a more detailed discussion of this issue.

fee-for-service exposure.[15] The following sections use survey data, as well as claims and encounter data, to examine these issues.

Levels of Service Use

Survey Data. Table 3 displays survey findings on utilization of health services for the expansion population, overall and by eligibility category. More than two-thirds of expansion beneficiaries visited a physician within three months of responding to the survey. Those who reported visiting a physician averaged three visits during the three-month period. Fifteen percent of expansion beneficiaries had visited the emergency room during the past three months. Healthy, non-pregnant adults are unlikely to visit the physician more than once a year so that the percent with a physician visit in the past twelve months may be a more useful measure. Looking back over a one-year time period, 90 percent of expansion beneficiaries saw a physician at least once.

Slightly over half of expansion beneficiaries received a routine physical exam in the past twelve months and almost 90 percent had their blood pressure checked. Women were asked whether they had two preventive tests during the past year: (1) a Pap smear; and for those 40 years or older, (2) a mammogram. Nearly 60 percent of expansion beneficiaries had a Pap test and just under half received a mammogram.

[15] Beneficiaries who become eligible for OHP during a hospital admission are covered retroactively back to the date of admission. However, managed care plans are not at risk for the cost of these hospitalizations. In addition, beneficiaries who become eligible during the course of a month are not enrolled in a managed care plan until the first of the following month. Capitation rates for October 1998 through September 1999 assumed that 15 percent of service costs for New Adults/Couples are incurred prior to enrollment in a managed care plan.

Table 3

Utilization of Health Care Services by Expansion Population Survey Respondents

	All Expansion (n=903)	New Families (n=349)	New Adults/Couples (n=554)
Physician Visits in Past 3 Months:			
Percent with at Least One Visit	68.8	64.5	71.6*
Number of Visits (users only)	3.4	3.1	3.5
Percent with ER Visit in Past 3 Months	14.6	10.6	17.2**
Percent with Use in Past 12 Months:			
Physician Visit	89.2	88.0	90.0
Routine Physical/Check-up	55.4	53.1	56.9
Blood Pressure Check	86.2	82.3	88.7*
Pap Test (women only)	58.9	59.8	58.1
Mammography (women 40 years+ only)	47.9	35.7	52.1*
Visit to Specialist	43.3	34.6	49.0**
Hospital Admission	11.6	9.1	13.2
Visit to Dentist	57.3	62.5	54.0*
Prescription for Medicine	84.0	81.4	85.7
Mental Health/Substance Abuse Treatment	14.6	12.5	16.0

**Significantly different from New Families at p<.01.
*Significantly different from New Families at p<.05.

SOURCE: HER/RTI Survey 1998.

Over 40 percent of expansion beneficiaries saw a specialist during the preceding twelve months and 12 percent were hospitalized. Nearly three-fifths visited a dentist. Utilization of prescription drugs is quite high, with 84 percent having at least one prescription during the past year. Fifteen percent received mental health/substance abuse (MH/SA) treatment services.

New Adults/Couples generally have higher service use than New Families. For example, 72 percent of New Adults/Couples, compared to 65 percent of New Families, had at least one physician visit in the past three months; however, the difference disappears over a 12 month recall period. Nearly half of New Adults/Couples saw a specialist, while only about one-third of

New Families did so. New Adults/Couples were also more likely to have an emergency room visit. However, service use differences between these groups disappear after controlling for sociodemographic and health status characteristics in multivariate analyses.[16] Based on the regression findings it appears that higher service use by New Adults/Couples is largely driven by their poorer physical and mental health status.

Table 4 compares service use between OHP expansion beneficiaries and the Food Stamp comparison group. As a rule, OHP expansion beneficiaries report higher service utilization than Food Stamp recipients. Expansion beneficiaries are more likely than Food Stamp recipients to have seen a physician, had a routine physical, had a blood pressure check, seen a specialist, had a dental visit, and received a prescription for medicine. The findings are largely driven by their substantially higher (in some cases, more than twice as much) use compared to uninsured Food Stamp adults; expansion beneficiaries' health care service utilization is generally similar to that of insured Food Stamp recipients (data not shown). The poorer health status of the expansion population also explains some of the utilization differences.

Female OHP expansion beneficiaries generally report lower service use than female TANF beneficiaries (Table 4). Although there is no significant difference in the likelihood of having a physician visit in the past three months or over the course of a year, TANF respondents were more than twice as likely to have an emergency room visit and to be hospitalized. TANF beneficiaries are also more likely to see a specialist (53 percent versus 42 percent) and to receive MH/SA treatment (24 percent versus 13 percent). On the other hand, there are no differences in

[16] Full results of our regression analyses are reported in Appendix A.

Table 4

Utilization of Health Care Services by Expansion, Food Stamp, and TANF Population Survey Respondents

	All Expansion (n=903)	All Food Stamp (n=316)	Female Expansion (n=560)	Female TANF (n=275)
Physician Visits in Past 3 Months:				
Percent with at Least One Visit	68.8	45.3**	73.7	76.8
Number of Visits (users only)	3.4	3.6	3.4	4.2
Percent with ER Visit in Past 3 Months	14.6	12.8	11.2	25.5##
Percent with Use in Past 12 Months:				
Physician Visit	89.2	75.3**	91.5	94.7
Routine Physical/Check-up	55.4	43.8**	60.8	56.4
Blood Pressure Check	86.2	73.6**	89.1	92.7
Pap Test (women only)	58.9	47.9	58.9	63.4
Mammography (women 40 years+ only)	47.9	33.8	47.9	39.4
Visit to Specialist	43.3	22.9**	42.3	53.0##
Hospital Admission	11.6	8.2	9.9	24.7##
Visit to Dentist	57.3	36.9**	59.0	56.5
Prescription for Medicine	84.0	54.9**	86.4	89.4
Mental Health/Substance Abuse Treatment	14.6	10.2	13.3	23.8##

**Significantly different from Expansion at p<.01.
*Significantly different from Expansion at p<.05.
##Significantly different from Female Expansion at p<.01

SOURCE: HER/RTI Survey 1998.

the likelihood of receiving a variety of preventive services. In addition, female expansion and TANF respondents were equally likely to visit a dentist and to receive a prescription drug.

Many of the differences reported are likely explained by higher rates of maternity-related service use by TANF beneficiaries. For example, specialist visits included visits to OB-GYNs and hospitalizations included maternity admissions. Pregnant women receiving routine prenatal care should also have regular blood pressure checks. In addition, high MH/SA treatment use

probably reflects mandatory perinatal substance abuse treatment, as well as state efforts to provide behavioral health services as part of welfare to work initiatives. Although we have restricted our analyses to females, TANF respondents are considerably younger and are more likely to be of child-bearing age. Furthermore, expansion beneficiaries who become pregnant should switch eligibility to a non-expansion category so that the expansion population should report minimal use of maternity services. While our survey data do not allow us to distinguish the contribution of maternity services, we are able to do so in the analyses of claims and encounter data. These analyses confirm that higher hospitalization rates for TANF recipients are restricted to maternity-related admissions. Holding aside maternity office visits, female expansion beneficiaries are also more likely to have an evaluation and management office visit. Claims and encounter data also confirm substantially higher use of MH/SA services in the TANF population.

After controlling for demographic and health status differences in multivariate analyses, TANF beneficiaries still had higher use rates for a number of services. Most of these can be explained by greater use of maternity-related services. On the other hand, TANF recipients were significantly (although only at $p<.10$) less likely to have a routine exam. This is particularly surprising since pregnant women should be receiving routine prenatal care. However, it is possible that survey respondents did not consider prenatal visits to be a routine check-up.

Claims and Encounter Data. Average service use per person year for the expansion population based on claims and encounter data is shown in Table 5. Unlike the survey findings, which mainly report the likelihood that a beneficiary used a service during the recall period,

Table 5

Service Use for Expansion Beneficiaries
(rates per 100 beneficiary years)

		Only Expansion			
	All Expansion (n=236,309)	Female (n=86,682)	Male (n=98,328)	**New Families** (n=78,901)	New Adults/ Couples (n=106,110)
All Inpatient Admissions	17.5	10.8	11.2	6.0	14.5##
Maternity Admissions	5.9	0.9	--	0.8	0.2##
Non-maternity Admissions	11.6	9.8	11.2**	5.2	14.3##
ER Visits	8.9	7.1	8.9**	5.3	9.9##
E&M Visits	323.2	374.3	232.5**	258.2	335.8##
Maternity Office Visits	11.2	2.7	--	2.3	0.8##
Mental Health/Substance Abuse Visits	399.7	236.7	307.9**	117.5	384.4##
Dental Visits	141.2	151.3	141.1**	139.3	151.1##

** Significantly different from Female at p<01.
Significantly different from New Families at p<01.

SOURCE: HER analysis of claims, encounter, and eligibility files maintained by Office of Medical Assistance Programs, 1996 and 1997.

service use rates calculated from encounter and claims data reflect both the probability of using a service and the intensity of service use for those receiving at least one. If our comparison groups have differing service intensity, findings based on claims and encounter data could differ from survey findings. In addition, as noted previously, encounter data under-report services provided. Therefore, we expect that our claims and encounter data analyses understate levels of service use; however, we do not expect this under-reporting to bias comparisons of relative service use between groups.

Expansion beneficiaries have approximately 18 inpatient admissions per 100 beneficiary years. Of these, one-third is maternity-related. However, nearly all of the maternity-related admissions occur among expansion beneficiaries that also have a period of coverage under another eligibility category (primarily TANF and OBRA). Similarly, maternity-related office visits are confined almost entirely to expansion beneficiaries with a period of coverage under a non-expansion eligibility category. There is an average of nine emergency room visits per 100 expansion beneficiary years. The evaluation and management (E&M) visit rate is fairly high, 335 per 100 beneficiary years, or more than three per person each year. Expansion beneficiaries have even greater use of MH/SA services, making more than four visits per beneficiary year. Dental services are also widely used, with an average of 1.5 visits per beneficiary year. The need for dental services was often cited as an important motivation for enrolling in OHP in focus groups of expansion beneficiaries.[17]

Males have significantly higher non-maternity inpatient admission rates, emergency room visit rates, and MH/SA visit rates. While the magnitude of the difference is small for admissions and emergency room visits, males have 30 percent more MH/SA visits than females.

[17] Focus groups of expansion beneficiaries were conducted in Portland and Eugene in February 1999.

On the other hand, female expansion beneficiaries have 60 percent more E&M visits than do males. Females also use significantly more dental services, although the difference is smaller (less than 10 percent).

With the exception of maternity-related services, encounter data show that New Adults/Couples consistently use more of all types of services than do New Families. New Adults/Couples have three times as many non-maternity admissions, twice as many emergency room visits, more than three times as many MH/SA visits, and 30 percent more E&M visits. Encounter data generally confirm survey findings of higher service use by New Adults/Couples. The exception is dental services—while survey data showed that New Families were significantly more likely to visit the dentist at least once, encounter data show that New Adults/Couples use significantly more dental services during the course of the year. These conflicting findings could be explained by greater service intensity for those New Adults/Couples with service use.

Adverse Selection

In focus groups of expansion beneficiaries, the need for emergency care was most often mentioned as the motivation for joining OHP. In addition, many of those who allowed their coverage to lapse did not want to complete the paperwork necessary to renew their eligibility if they did not have an immediate need for services, particularly because they knew they could re-enroll in the future if they became ill. Analyses reported elsewhere show that beneficiaries who use services are significantly more likely to recertify at the end of a six-month eligibility period (Haber, Mitchell, McNeill, 2000). The impact of prior service use is particularly strong for New Adults/Couples.

Our survey asked respondents to identify the most important reason for having insurance. The expansion population most commonly cited the need to pay for a current medical condition (40 percent), followed by the need to pay for a possible accident or illness (34 percent). The remaining 27 percent identified the need to pay for routine check-ups. Among expansion beneficiaries, New Adults/Couples were significantly more likely than New Families to cite the need to pay for a current medical condition (49 percent compared to 25 percent). In contrast, the predominant reason for New Families was paying for a possible accident or illness (41 percent, compared to 29 percent of New Adults/Couples).

Female expansion beneficiaries did not differ significantly from female TANF beneficiaries in the distribution of reasons for having insurance, with approximately 40 percent of both groups citing the need to pay for a current medical condition. On the other hand, expansion beneficiaries differed significantly from Food Stamp recipients. Food Stamp respondents were most likely to identify the need to pay for a possible accident or illness (53 percent) and least likely to cite the need to pay for a current condition (18 percent).

Comparison with the uninsured Food Stamp recipients, some of whom are eligible for expansion coverage but are not enrolled,[18] provides further evidence of adverse selection in the expansion population. Expansion beneficiaries are more than twice as likely as uninsured Food Stamp recipients to report the need to pay for treatment of a current medical condition as the most important reason for having insurance (39.7 percent vs. 17.0 percent). They are also far more likely to report that a disability prevents them from working (48.3 percent vs. 27.3 percent). Finally, expansion beneficiaries also have significantly poorer physical health status than uninsured Food Stamp recipients (an SF-12 score of 44.4 vs. 48.9). This difference is

particularly notable because it reflects health status at the time of the survey rather than at the point of enrollment in OHP. Given expansion beneficiaries' better access to care compared to uninsured Food Stamp recipients, one would expect survey responses to understate the difference between the groups at the time of enrollment.

These responses give credence to the contention that expansion beneficiaries, particularly New Adults/Couples, are likely to enroll when they have an immediate need for services. However, they may not differ from a traditional Medicaid TANF population in this regard. In order to assess whether expansion beneficiaries do, in fact, enroll during episodes of illness, we analyze service use during the first month of an expansion eligibility spell. If expansion beneficiaries are likely to enroll in OHP because they become ill, their service use in the first month of a spell should be disproportionately high relative to other eligibility groups and relative to average use over the course of a spell. Table 6 shows the percentage of expansion eligibles with selected measures of service use during the first month of an eligibility spell and service use in the first month of a spell relative to average monthly use over the course of a spell.[19] Comparisons are made between subgroups of expansion eligibles and, for females, between expansion and TANF beneficiaries.

[18] Because the Food Stamp program covers low-income individuals up to 130 percent of poverty, not all members of the uninsured Food Stamp sample are eligible for OHP expansion eligibility.

[19] Beneficiaries who become eligible during the course of a hospital admission may not appear in the eligibility files for a month or so, although they receive retroactive coverage from the date of admission. In order to capture this service use, we counted either services received in the first month of an eligibility spell or service received in the month prior, if any.

Table 6

Service Use During the First Month of an Eligibility Spell

	Only Expansion					Pure TANF
	All	Female	Male	New Families	New Adults/Couples	Female
Percent with Use in First Month of Eligibility Spell						
Any Use	50.3%	56.2%	44.8%**	43.5%	55.8% ##	78.6% **
Any Admissions	1.5	1.3	1.6**	0.8	2.1 ##	1.5
Any Maternity Admissions	0.1	0.1	--	0.1	0.0 ##	0.9 **
Any Non-maternity Admissions	1.4	1.2	1.6**	0.7	2.1 ##	0.6 **
Any ER Visits	1.6	1.4	1.8**	1.1	2.1 ##	1.5
Any E&M Visits	23.3	27.9	19.0**	21.2	25.0 ##	18.3 **
Any Maternity Office Visits	0.2	0.4	--	0.3	0.1 ##	1.8 **
Any MH/SA Visits	4.5	4.2	4.9**	2.2	6.4 ##	57.1 **
Any Dental Visits	9.6	9.4	9.7*	8.7	10.3 ##	4.4 **
Use in First Month of Eligibility Spell Relative to Average Monthly Use						
All admissions	2.6	2.1	3.1 **	2.2	2.7 ##	1.2 **
Maternity Admissions	1.4	1.4	--	1.5	1.0	1.1
Non-maternity admissions	2.6	2.1	3.1**	2.2	2.7 ##	1.6 **
ER Visits	2.6	2.4	2.7**	2.3	2.7 ##	2.0 *
E&M Visits	1.6	1.6	1.8**	1.5	1.7 ##	1.2 **
Maternity Office Visits	1.9	1.9	--	1.9	1.9	2.4 *
MH/SA Visits	1.6	1.4	1.8**	1.4	1.7 ##	2.0 **
Dental Visits	1.1	0.9	1.2**	1.0	1.1 ##	0.6 **

** Significantly different from Only Expansion Female at p<01.
* Significantly different from Only Expansion Female at p<05.
Significantly different from New Families at p<01.
Significantly different from New Families at p<05.

SOURCE: HER analysis of claims, encounter, and eligibility files maintained by Office of Medical Assistance Programs, 1996 and 1997.

Fifty percent of expansion beneficiaries use some services during their first month of eligibility. E&M services are the most commonly provided, with 23 percent of expansion beneficiaries receiving at least one. The next most prevalent are dental services, used by 10 percent of expansion eligibles in the first month. Less than two percent have a hospital admission during the first month. Female expansion beneficiaries are more likely to use services during the first month of eligibility than are males (56 percent versus 45 percent), largely because they are more likely to use E&M services. New Adults/Couples are more likely to have service use in the first month than New Families and this greater likelihood is found in all categories of use except maternity.

Expansion beneficiaries tend to use services most intensively during the initial month of an eligibility spell (Table 6). All categories of service show proportionately higher use in the first month compared to average monthly use over the course of the spell. Notably, inpatient and emergency room use is more than twice as high in the first month. Males use proportionately more services in the first month compared to females, while New Adults/Couples use proportionately more than New Families.

These findings support the hypothesis that expansion beneficiaries tend to enroll when they are in need of services. They particularly reinforce the impression that an immediate need for care is a more important factor in the enrollment decision for New Adults/Couples than for New Families. However, only a small proportion have an emergency room visit or a hospitalization during the first month, suggesting that critical care needs are not driving the decision to enroll. Similarly, we did not find that the DRGs for admissions that occurred during the first month of an eligibility spell were associated with traumas or emergency conditions.

It is possible that OHP beneficiaries generally, not just expansion beneficiaries, use relatively greater numbers of services in the first month of eligibility due to pent-up demand. To assess whether expansion beneficiaries have different patterns of service use in the first month, we compared female expansion and TANF beneficiaries. As shown in Table 6, TANF beneficiaries are substantially more likely than female expansion beneficiaries to use at least one services during the first month (79 percent compared to 56 percent). This difference is explained almost entirely by MH/SA services (used by 57 percent of TANF beneficiaries) and, to a lesser extent, maternity-related services. Female expansion beneficiaries are more likely to have a non-maternity admission, an E&M visit, and a dental visit during the first month Compared to TANF beneficiaries, female expansion beneficiaries also have proportionately higher use in the first month overall and in all categories except maternity-related and MH/SA services.

Fee for Service Liability

If an OHP beneficiary first becomes eligible when she is hospitalized, these services are reimbursed as fee-for-service claims by OMAP and are not the responsibility of a capitated managed care plan. Since these services are likely to be high cost, OHP will continue to incur a significant fee-for-service liability if beneficiaries tend to become eligible when they have a serious illness or accident requiring emergency hospitalization. OMAP believes that expansion beneficiaries, particularly New Adults/Couples, are likely to become eligible when they are hospitalized and they have reduced capitation rates for this eligibility group to reflect their fee-for-service liability. In order to examine whether expansion beneficiaries do become eligible during emergency hospitalizations and disproportionately incur fee-for-service liabilities outside

of capitated arrangements, we analyze the proportion of all services received that are reported as fee-for-service claims. Remaining services are reported as encounters by capitated managed care plans.

With the exception of dental, a sizable share of the services received by expansion beneficiaries is reported as a claim that represents a fee-for-service liability to OMAP.[20] Consistent with OMAP's policy of paying fee-for-service for the hospital care of beneficiaries who become eligible during the course of that inpatient stay, inpatient services are disproportionately reimbursed fee-for-service. Approximately one-third of admissions and emergency room visits are reimbursed on a fee-for-service basis, while E&M visits are only about half as likely to be incurred as claims.[21]

However, this does not necessarily support OMAP's claim that expansion beneficiaries, particularly males and New Adults/Couples, pose a substantial fee-for-service liability because they become eligible during a hospital stay. While OMAP remains liable for a high percentage of hospitalizations, overall hospitalization rates are low in the expansion population. As reported earlier, only a small percentage of expansion beneficiaries are hospitalized during the first month of an eligibility spell. Furthermore, it is not clear that expansion beneficiaries receive disproportionate amounts of fee-for-service care relative to other beneficiaries. While female expansion beneficiaries are significantly more likely than TANF to have a fee-for-service

[20] MH/SA services are excluded from these analyses because they were only a capitated service in selected demonstration counties during this time period.

[21] This result should be interpreted cautiously because under-reporting of inpatient encounters has been particularly severe. On the other hand, to the extent that admissions are incurred as a fee-for-service liability prior to enrollment in a managed care plan, the impact of under-reporting in encounter data is mitigated. Nonetheless, poorer reporting of inpatient encounters relative to other services may help explain our finding that fee-for-service claims account for a disproportionate share of inpatient services.

admission, they are significantly less likely to have an E&M visit, a maternity-related office visit, or a dental visit outside of a capitated plan.

Continuity of Coverage

The analyses in the preceding section provide some support for the claim that expansion beneficiaries tend to enroll when they are in need of services, although they may not differ from TANF recipients in this regard. In this section, we examine whether expansion beneficiaries receive continuous coverage through OHP or whether they enroll episodically, dropping out after their immediate need for services ends and re-enrolling if they become ill later. Continuity of coverage is particularly important in capitated programs such as OHP because plans do not have an opportunity to manage care if their members only enroll when they are ill.

To examine this issue, we analyzed eligibility spells for expansion beneficiaries with some eligibility in the first five years of OHP. Although eligibility data are truncated at December 1998, our analyses included only beneficiaries who first became OHP-eligible prior to August 1998. Therefore, we should be able to observe the full extent of at least one six month period of guaranteed OHP eligibility for everyone in these analyses.[22]

Patterns of OHP Eligibility

In general, the expansion population receives fairly brief coverage under OHP. Expansion eligibles are covered an average of 10 months per spell and an average of 14 months across all spells (Table 7). Forty percent have six or fewer months of eligibility, indicating that

they did not re-enroll after an initial six-month period of guaranteed eligibility. On the other end of the spectrum, two percent have four or more years of eligibility and have been enrolled virtually continuously since the program's inception.

We do not find patterns of repeated enrollment and disenrollment among expansion eligibles. Over two-thirds have a single spell of expansion coverage. However, nine percent have three or more spells. For those with multiple spells, the gap between spells averages just under 10 months. Expansion beneficiaries are covered less than half of the time that they potentially could be covered. We count the time from when a beneficiary is first eligible through the end of our study period (December 1998) as a gross measure of maximum potential eligibility.[23] On average, expansion eligibles were covered 45 percent of the potential eligibility period.[24]

Although we expected New Adults/Couples to enroll more episodically because they are responding to an immediate need for care, descriptive analyses show that they are covered for somewhat longer periods than New Families. They are also more likely to have a single eligibility spell. The distribution of spell lengths appears to be somewhat more skewed for New Adults/Couples, with higher proportions having both very short and very long periods of coverage. They are also covered for a somewhat lower proportion of the potential eligibility period.

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[22] Nonetheless, 27 percent had fewer than six months of expansion eligibility, mostly for five months. This is probably explained by beneficiaries who became eligible during the course of a hospital admission. While these beneficiaries receive retroactive coverage from the date of admission, they do not appear in the eligibility files for another month or so.

[23] This is a gross measure of potential eligibility because it assumes that the individual still meets OHP eligibility criteria, has not obtained insurance outside of OHP, still resides in Oregon, and could not have been eligible prior to their first period of eligibility. The first three assumptions tend to overstate the potential eligibility period, while the fourth understates it.

[24] For those with periods of coverage in both expansion and non-expansion eligibility categories, periods of eligibility in non-expansion categories were included in the calculation of coverage. Nearly one-third of expansion beneficiaries have some coverage under non-expansion categories.

Table 7

Patterns of OHP Eligibility, Expansion Beneficiaries with Some Eligibility 1994-1998

	All Expansion	Expansion Only	All New Families	All New Adults/Couples
Months of Eligibility per Spell [a]	9.5	10.0	9.1	9.8
Total Months of Eligibility [a]	13.6	14.2	13.3	13.9
% with One Eligibility Spell [a]	67.9	69.0	66.2	69.6
% with 6 or Fewer Months of Eligibility [a]	39.8	39.9	38.8	40.7
% of Potential Eligibility Period Covered	45.0	39.6	46.2	43.9

[a] For expansion beneficiaries with some period of coverage in non-expansion categories, includes only periods of coverage in expansion eligibility categories.

SOURCE: HER analysis of eligibility files maintained by Office of Medical Assistance Programs, 1994-1998.

Expansion beneficiaries that are eligible exclusively in expansion categories receive slightly more continuous coverage through the expansion program than do those with mixed eligibility. They are somewhat more likely to have a single expansion eligibility spell and to be eligible under the expansion program for four or more years. However, taking into account coverage under any eligible category (expansion or non-expansion), they are covered for a shorter portion of the time they potentially could be covered (40 percent).

Expansion beneficiaries receive far more episodic coverage than TANF recipients. Compared to female TANF beneficiaries, female pure expansion beneficiaries average nearly

four fewer months of eligibility per spell and across all spells. Expansion beneficiaries are more likely to be covered for six or fewer months and less than half as likely to be covered for four or more years. However, there is no difference between the groups in the percent of the potential eligibility period covered.

Duration of Expansion Eligibility Spells

We estimated a proportional hazard model to identify the impact of beneficiary characteristics on the duration of an expansion eligibility spell.[25] The proportional hazard model takes into account right-hand censoring of spell duration for beneficiaries with an eligibility spell that was ongoing in December 1998.[26] Demographic characteristics included dummy variables for age (26-34, 35-44, 45-54 or 55 and over, with 19-25 constituting the omitted category), being white, being female, and being English-speaking. Two dummy variables captured location of residence: whether the respondent lived in an urban area outside of the tri-county Portland metropolitan area or in a rural area (with residents of the tri-county area as the omitted group).[27] An additional dummy variable controlled for whether the beneficiary qualified as a New Family rather than a New Adult/Couple. We hypothesized that New Adults/Couples might be more likely to seek coverage episodically during a spell of illness. We further hypothesized that beneficiaries who had been eligible for long periods in the past are likely to have subsequent

[25] The model included only pure expansion eligibility spells (i.e., those that did not include any months in a non-expansion category) so that impacts on expansion eligibility would not be contaminated by time trends in Medicaid eligibility for other eligibility categories. For example, welfare reform may have decreased the duration of TANF eligibility.

[26] Sixteen percent of the observations in our model were censored.

[27] The tri-county Portland metropolitan area is defined as Multnomah, Clackamas, and Washington Counties. Counties in an MSA outside of the tri-county area were categorized as "Other Urban." These include: Columbia, Jackson, Lane, Marion, Polk, and Yamhill. Remaining counties were considered rural.

spells of longer duration. Therefore, we also controlled for the number of months of OHP eligibility in any eligibility category prior to the current spell.

The results of the proportional hazard model are presented in Table 8. A negative coefficient, and a risk ratio less than one, indicates a smaller likelihood of a spell ending and, hence, a longer eligibility spell. Nearly every variable in our model is highly significant. Dummy variables for age indicate that spell duration increases with age. Whites have longer spells than non-whites and women have longer spells than men. Surprisingly, English-speaking individuals have significantly shorter spells.[28] However, this is consistent with findings reported elsewhere (Haber, Mitchell, and McNeill, 2000) that English-speaking expansion eligibles are less likely to recertify their OHP coverage at the end of a six-month eligibility period. As compared to beneficiaries residing in the Portland metropolitan area, residents of other urban counties have significantly longer spells, whereas there is no difference for residents of rural counties. As predicted and in contrast to our descriptive findings, after controlling for other characteristics, beneficiaries that qualify in the New Families category have significantly longer eligibility spells than New Adults/Couples. On the other hand, the duration of an eligibility spell was significantly shorter for those who had long periods of prior eligibility.

[28] Language was not reported for eligibility spells in 1994. If a beneficiary had some period of eligibility in a later year, we assigned the language variable from those records to the 1994 observation. Although we were able to assign a language variable to a large number of spells that began in 1994, we were not able to identify language for 15,813 observations (less than 4 percent of our sample). These observations are omitted from our regressions. As a result eligibility spells from 1994 are under-represented in our data. In order to assess the impact of this under-representation, we estimated an alternate version of the regression model that omitted language as an explanatory variable. The results were virtually identical to those from the model that included language. The exception was the variable for rural residence, which became significant indicating that the positive effect of being English-speaking is being attributed to rural residence. As a result, we report results for the model that includes language.

Table 8

Proportional Hazards Model for Duration of Expansion Eligibility Spell

Independent Variable	Mean (standard deviation)	Risk Ratio
Age:		
26-34	0.298 (0.457)	0.860***
35-44	0.273 (0.445)	0.743***
45-54	0.140 (0.347)	0.623***
≥55	0.059 (0.236)	0.561***
White	0.841 (0.366)	0.907***
Female	0.481 (0.500)	0.896***
English-speaking	0.939 (0.240)	1.105***
Resident of urban area (excl. Portland)	0.287 (0.452)	0.982***
Resident of rural area	0.361 (0.480)	1.005
Eligible as New Family	0.450 (0.498)	0.973***
Prior months of OHP eligibility	6.074 (10.078)	1.008***
N=412,068		

***Significant at p<.0001.

SOURCE: HER analysis of eligibility files maintained by Office of Medical Assistance Programs, 1994-1998.

Transitions Between Eligibility Categories

While most expansion beneficiaries receive OHP coverage exclusively under expansion eligibility categories, 32 percent were covered for some period of time under another category. These beneficiaries were likely to change coverage category multiple times, with an average of

1.6 transitions between eligibility categories. For those beneficiaries transitioning between categories, just over half (51 percent) of their OHP coverage came under an expansion category.

By far the most frequent transitions are between TANF and expansion coverage. Fifty percent of beneficiaries with a transition moved from TANF to expansion and 31 percent moved from expansion to TANF. Transitions between expansion and OBRA categories for pregnant women are the next most common change; 22 percent of beneficiaries with a transition moved from OBRA to expansion and 14 percent moved from expansion to OBRA.

The proportion of expansion beneficiaries transitioning between categories has remained stable over time. In any given year, 15 to 16 percent of expansion beneficiaries are also covered under another eligibility category. There is also no evidence that TANF beneficiaries were more likely to transition to expansion eligibility to retain Medicaid benefits following welfare reform. In 1995, 16.2 percent of TANF beneficiaries moved from TANF to expansion coverage. This percentage was largely unchanged in 1998 at 16.7 percent.

Conclusions

Based on Oregon's experience, Medicaid eligibility expansions can be an effective mechanism for providing health care coverage to low-income uninsured populations. OHP rapidly enrolled large numbers of people through its expansion program, far exceeding the state's projections in the early years. In 1996, an estimated 64 percent of the potentially eligible population was enrolled in OHP (Lipson and Schrodel, 1996). While the size of the expansion population has fallen off subsequently, it remains a very significant component of Oregon's Medicaid program. Nonetheless, OHP's eligibility expansion has not eradicated the problem of

the uninsured in Oregon—although the rate dropped as low as 17 percent in 1996, it is estimated that 23 percent of the population living below poverty remained uninsured in 1998 (Office for Oregon Health Plan Policy and Research, 1999).

Discussions of programs designed to reduce the uninsured population through expansion of public insurance, most notably the recent SCHIP legislation, have been marked by debate about the extent to which they will crowd-out private insurance. Although OHP did not incorporate any special provisions to mitigate crowd-out, it does not appear that this has been a serious problem. The vast majority of beneficiaries covered under OHP's eligibility expansion were uninsured prior to enrolling and only a small fraction had an alternate source of employment-based insurance. Indeed, only about half of the expansion population had an employed family member.

Although the majority of people covered by OHP's expansion program are individuals who would not have otherwise qualified for Medicaid coverage, about one-third have some period of coverage under another eligibility category. Expansion eligibles most commonly receive coverage as TANF beneficiaries. However, we find no evidence that welfare reform increased the likelihood of TANF recipients shifting to expansion eligibility in order to retain Medicaid benefits.

The extent to which Oregon's experience is generalizable to other states depends, in part, upon certain key program features, such as whether all adults are covered or only parents, the length of guaranteed eligibility, and whether there is immediate coverage of all services without a waiting period. Oregon also has a more ethnically homogeneous population than many states. With these caveats in mind, Oregon provides a number of important lessons for other states.

Although OHP's eligibility expansion has been an effective mechanism for extending some coverage to low-income populations, the goal of providing continuous insurance coverage is more elusive. Most expansion beneficiaries are covered for brief periods of time and two-fifths never re-enroll after an initial six-month guaranteed eligibility period. This episodic enrollment is particularly problematic for managed care plans that rely on continuity of coverage in order to control service use. On the other hand, it does not appear that a large proportion of expansion beneficiaries have a pattern of repeated enrollment and disenrollment.

Unfortunately, states may face serious challenges to encouraging more continuous enrollment. Procedurally, OHP has not made the re-enrollment process particularly onerous, although the imposition of premiums appears to have shortened the average length of eligibility. However, beneficiaries have little incentive to re-enroll since they know they can receive immediate coverage in the future if they need it. While excluding coverage of pre-existing conditions or instituting a waiting period before benefits begin would reduce this disincentive to re-enroll, it would undoubtedly increase providers' uncompensated care burden. One simple option is to increase the period of guaranteed eligibility to a year, for example.

Other states considering eligibility expansions similar to Oregon's should recognize that they will be enrolling a relatively sick population with high service use rates. They are also likely to enroll in the program when they are sick and in need of care. While our findings differ from previous studies of Washington's Basic Health Plan, this may be explained by that program's exclusion of pre-existing conditions during the first year of enrollment, whereas OHP covers services from the date of application. As OHP has recognized, the adult expansion population is comprised of two very distinct groups. Single adults and childless couples who

enrolled in OHP were significantly sicker and higher service users than adults with children. Their poorer health status and greater use may reflect higher levels of pent-up demand as they were also more likely to be uninsured prior to enrolling in OHP. While single adults and childless couples may be motivated to enroll by an immediate need for health care, parents of children may have been brought into the system when they were enrolling their children. Although children are covered under non-expansion categories, a caseworker who is enrolling a child in OHP may inform the parents of their own eligibility under the expansion program. Oregon's experience covering adults with children is of particular interest to other states that are exploring options for expanding coverage of families, for example through their SCHIP programs. Based on Oregon's experience, uninsured parents will be a less costly population for these state's to include in their Medicaid program than other uninsured adults.

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Appendix A

Appendix Table A-1

Logistic Regression Results for Health Care Utilization for Expansion Population

	MD Visit-3m	MD Visit-12m	Routine Exam	BP Check	ER Visit-3m	Specialist Visit	Hospital Admission	Pap test	Mammogram	Dentist Visit	Prescription Meds	MH /SA Treatment
New Adults /Couples	1.28	1.31	1.18	1.58#	1.42	1.24	1.13	1.46	1.39	0.88	1.16	1.04
Age:												
26-34	0.72	0.87	0.74	0.60	0.69	0.74	0.57	1.22	---	1.77#	0.87	2.69#
35-44	0.84	0.70	0.58#	0.64	0.47*	0.52*	0.33**	0.81	---	1.23	0.50#	2.76#
45-54	0.62	0.48	0.80	1.27	0.24**	0.83	0.44#	0.79	1.93#	1.21	0.82	1.35
55-64	0.62	0.54	0.79	0.60	0.21**	0.68	0.43#	0.49#	2.65*	0.86	0.57	0.96
Female	2.00**	1.80*	1.83**	1.99**	0.42**	1.01	0.71	---	---	1.05	1.59*	0.70
White	1.07	1.06	0.96	1.58	0.61	1.15	0.96	1.17	2.02	1.24	1.43	0.91
Married	1.04	1.25	1.33#	1.37	0.61#	1.10	1.41	1.07	1.71#	1.03	1.21	0.38**
Employed	1.31	1.74*	1.49*	1.48	1.01	1.02	1.24	0.83	1.05	1.08	0.98	1.62#
Education												
High School Grad	1.13	1.58	1.31	1.44	2.42**	0.96	2.12*	1.13	0.82	1.77**	1.04	0.75
College	1.12	1.22	1.51*	1.25	1.76#	1.63*	1.97#	1.6#	0.87	1.93**	1.10	1.11
SF-12:												
Physical Health	0.96**	0.96**	0.99*	0.95**	0.95**	0.96**	0.95**	1.01	0.99	1.00	0.95**	0.99
Mental Health	0.98**	0.97**	1.00	0.98*	0.99	0.99	0.98#	1.01#	0.97**	0.99#	0.95**	0.95**
Disability Prevents Work	1.28	1.85	1.56#	1.04	0.90	1.29	1.45	0.65	0.77	0.82	0.81	1.50
Residence												
Urban (except Portland)	0.84	0.57#	1.12	0.64	0.72	0.92	0.93	0.94	0.96	0.75	0.88	1.03
Rural	0.65*	0.51*	0.7*	0.73	0.77	0.66*	0.97	0.73	0.88	0.82	0.79	1.11

NOTE: Odds Ratios are presented.

**Significant at .01 level
* Significant at .05 level
# Significant at .10 level

SOURCE: HER/RTI Survey, 1998.

Appendix Table A-2

Logistic Regression Results for Health Care Utilization for Expansion and Food Stamp Populations

	MD Visit-3m	MD Visit-12m	Routine Exam	BP Check	ER Visit-3m	Specialist Visit	Hospital Admission	Pap test	Mammogram	Dentist Visit	Prescription Meds	MH/SA Treatment
Health Insurance	3.67**	3.48**	1.73	2.37*	1.10	2.09#	1.12	0.92	1.94	2.17*	2.00*	0.88
Expansion	1.19	1.47	1.06	1.29	0.93	1.41	1.11	1.99#	0.91	1.86**	3.00**	1.27
Age:												
26-34	1.25	1.49	1.62	0.87	0.70	1.09	0.94	0.89	---	1.02	0.85	2.75#
35-44	0.93	0.66	0.96	0.48#	0.49#	0.76	0.44#	0.67	---	0.85	0.46*	2.81*
45-54	1.05	0.60	1.43	1.06	0.26**	1.24	0.55	0.86	1.44	0.77	0.93	1.44
55-64	1.06	0.79	1.61	0.79	0.22**	1.10	0.51	0.36*	1.65	0.55#	0.67	0.83
Female	2.23**	1.76*	1.69**	1.90**	0.59*	1.09	0.91	---	---	1.22	1.66**	0.95
White	1.11	1.09	0.93	1.47	0.87	0.24	0.76	1.12	1.11	1.12	1.50	1.86#
Married	1.07	0.89	0.99	0.91	0.64#	1.07	1.04	0.68	1.12	0.89	1.18	0.65
Employed	1.31	1.63#	1.33	1.74*	0.93	1.14	1.15	0.86	0.97	0.94	1.29	
Education												
High School Grad	1.27	1.24	1.68*	1.29	1.02	1.24	1.15	0.94	0.76	1.88**	0.95	0.80
College	1.08	1.08	1.53#	1.27	0.90	1.33	1.09	1.95*	0.87	2.33**	1.69#	1.09
SF-12:												
Physical Health	0.69**	0.95**	0.99	0.95**	0.94**	0.96**	0.94**	1.01	0.99	1.00	0.95**	1.00
Mental Health	0.98**	0.97	1.00	0.97**	0.99	0.99	0.99	1.02*	0.99	1.00	0.98#	0.94**
Disability Prevents Work	1.58	1.31	1.55#	1.10	1.18	1.79*	1.28	1.30	1.13	0.81	1.55	2.28#
Residence												
Urban (except Portland)	0.97	0.82	0.90	0.67	0.55*	0.80	0.85	1.06	1.60	0.68*	0.58*	0.85
Rural	0.83	0.68	0.74	0.67	0.91	0.61**	0.80	0.95	1.08	0.75	0.76	0.91

NOTE: Odds Ratios are presented.

**Significant .01 level
* Significant at .05 level
# Significant at .10 level

SOURCE: HER/RTI Survey, 1998.

Appendix Table A-3

Logistic Regression Results for Health Care Utilization for Expansion and TANF Females

	MD Visit-3m	MD Visit-12m	Routine Exam	BP Check	ER Visit-3m	Specialist Visit	Hospital Admission	Pap test	Mammogram	Dentist Visit	Prescription Meds	MH/SA Treatment
TANF	0.90	1.32	0.74#	2.19*	2.00**	1.60*	2.73**	0.91	0.95	0.80	0.98	1.47
Age:												
26-34	0.72	0.61	0.64	0.82	0.76	0.77	0.60#	0.61#	---	1.50	0.95	2.82
35-44	0.45**	0.38	0.44**	0.69	0.53#	0.64#	0.40**	0.31**	---	1.13	0.53	2.09
45-54	0.55#	0.30#	0.83	3.59*	0.25**	0.83	0.53	0.44**	2.35**	1.02	0.89	1.93
55-64	0.36**	0.28#	0.66	1.01	0.16**	0.81	0.49	0.26**	3.2**	0.70	0.55	0.92
White	1.46	1.31	0.96	1.63	1.08	1.22	0.82	1.08	1.07	0.97	1.58	1.98
Married	0.90	0.78	1.05	1.10	0.76	1.20	1.09	0.89	0.94	1.10	0.84	0.54
Employed	1.04	1.12	1.07	1.20	0.85	1.01	0.62#	0.83	0.84	1.02	0.94	1.45
Education												
High School Grad	1.06	1.06	0.97	1.44	1.42	0.76	0.74	0.96	0.81	1.41#	1.14	0.58
College	0.98	1.30	1.10	1.63	1.44	1.35	0.81	0.99	1.17	1.76**	1.16	0.70
SF-12:												
Physical Health	0.97**	0.97*	1.00	0.95**	0.93**	0.96**	0.97**	0.99	0.99	1.00	0.95**	1.00
Mental Health	0.98#	0.96*	1.01	0.98*	0.98	1.00	0.99	1.00	0.98*	0.99*	0.96**	0.94
Disability Prevents Work	1.54	2.01	1.70*	0.81	0.71	1.40	0.65	0.70	0.70	1.20	1.01	1.84
Residence												
Urban (except Portland)	0.88	0.68	1.02	0.78	0.83	0.81	0.93	0.84	0.79	0.87	0.98	0.87
Rural	0.99	0.66	0.82	1.04	0.58#	0.76	1.19	0.87	1.08	0.85	0.94	0.75

NOTE: Odds Ratios are presented.

**Significant .01 level
* Significant at .05 level
# Significant at .10 level

SOURCE: HER/RTI Survey, 1998.